Chart Functions

Add

The add function allows users to overlay additional symbols or data series over top of the existing chart. This is different than the compare function in that the chart does not change the vertical axis from price to percentage and auto-scale to fit both. The vertical axis stays aligned with the chart's original data series. The new symbol/data series is merely overlaid on top. This allows for the actual price value of both data series to be visible without the chart collapsing if the values are too far apart. The add function is good for visual comparisons between two or more symbols.

The example below is an example of a chart containing the EURUSD and the EURJPY.

A popular reason for using the add function is the ability to compare market trends for several similar or related instruments simultaneously. For example, analyzing two different gold tracking ETFs to spot minor differences.

The example below is a chart containing two separate gold tracking ETFs. They are obviously quite closely related but careful examination shows that minor differences do occur.
To add a new symbol to overlay on top of the current data series/chart, simply click on the "Add" button on the toolbar along the top of the chart and type the symbol into the dialogue box and click the + sign.

Another option is the "Overly the main chart" feature. If this is unchecked, the new symbol will not be overlaid on top of the original data series, it will be sent to a new panel beneath the original one. This allows for greater control of each data series even though it can hinder direct, visual comparisons.
Compare

The compare function is a tool used to compare the market movements of two or more different symbols simultaneously. Comparing multiple symbols simultaneously is done for a couple of reasons. For example, it is an easy way to visualize market health as a whole. This could be accomplished by pulling up an SPY (which tracks the S&P 500) and adding the DIA (tracks the Dow) and QQQ (tracks the Nasdaq) symbols. The result is one single chart containing easy to read, pertinent information spanning the entire market.

The example below is an example of a chart containing the SPY, DIA and QQQ.

It is important to note, that when you add a symbol to a chart, the vertical axis will change from price to percentage. There percentage shown is the price movement for whatever period is currently visible on the chart. This is absolutely necessary. If you switch it back to price, the chart will collapse unless the price values of the symbols are very close to each other. Below is an example of a Google and Apple comparison chart when switched back to price. Their prices are about $500 apart. Therefore when you switch to price, both data series flatten out and the chart loses its effectiveness.
To add a comparison to your current data series/chart, simply click on the "Compare" button on the toolbar along the top of the chart and enter a symbol. Several popular symbols are already listed which can be checked in order to be added to the chart. Any symbol can be added however. If you would like a symbol that is not on the default list, just type the symbol into the dialogue box and click the + sign.

Check symbols for comparison

☐ S&P 500 Trust
☐ Nasdaq Composite
☐ Diamonds Trust
☐ Gold Trust
☐ Euro Currency Trust
☐ Nasdaq 100
☐ Nasdaq Financial 100

or add any symbol from the list

Company Comparison

Scaling Options

Right clicking on the vertical axis of any chart, will cause a window to pop up giving the user several different scaling options. These scaling options will affect not only how the chart is displayed but also how it will look when moving forward. Here is a rundown of the different options within the scaling options window.
Reset Scale: Will reset the scale back to its center point. After making several modifications to the look and/or scale of the chart, clicking this option will re-align everything back to its initial state.

Show Left Axis: Will show the vertical axis on the left hand side of the chart. A left oriented axis and a right oriented axis can be visible simultaneously.

Show Right Axis: Will show the vertical axis on the right hand side of the chart. A left oriented axis and a right oriented axis can be visible simultaneously.

Auto Scale: Allow the axis to scale automatically along with any price movements. This way, the data series will always be visible with only the axis changing accordingly.

Lock Scale: Locking the scale much different than allowing the axis to auto scale. When "lock scale" is active, the axis will stay frozen the way it is when it is initial locked. This means that the scale (price intervals) wont change along with price movements. It is therefore possible that if the data series moves high or low enough, it could move out of view of the chart window.

Scale Series Only: This option is for when there are studies or indicators overlaid onto the main chart window. When this option is active, the axis will scale according to the data series (price) alone. The values and coordinates of any active indicators will not be factored into the scaling of the axis. Keep in mind that they may cause parts of any indicators to not be visible within the chart.

Percentage: This option will change the vertical axis display from price to percentage. The percentage shown is the amount price has changed within the current view. The calculation starts at the first visible bar and continues from there.

Log Scale: This option will change the vertical axis from a standard linear scale to a logarithmic scale. Logarithmic scales use intervals that correspond to orders of magnitude rather than intervals that are equidistant from each other. Essentially using a log scale is appropriate when viewing data that covers a very wide range. Using logarithmic values instead of actual values can reduce the wide range of data into a more manageable size.
Chart Types

Kagi Charts

Kagi Charts are a type of chart composed of vertical lines (green for up and red for down) and small horizontal lines connecting them. Similar to Renko Charts, Kagi Charts do not factor in time. Time intervals are completely cast aside as Kagi Charts only take price action into consideration. The word Kagi is derived from the Japanese art of woodblock printing. A "Kagi" or "Key" was an L-Shaped guide used to properly align the paper for printing. Because of this, Kagi Charts are even sometimes referred to as "Key" Charts. The premise of Kagi Charts is fairly simple. Essentially, from the starting point (usually the first closing price) lines are drawn solely based on price action. The "Up" Lines (also called the yang line) are formed during uptrends, while "Down" Lines (yin lines) are formed during downtrends.

As long as prices continue to move in the current direction, the current up line or current down line will continue. Once price reverses enough (the necessary reversal amount is set by the trader), a horizontal line is drawn and then a line is drawn in the opposite direction of the previous line, stopping at the new closing price.

There are five different types of lines that can be drawn within a Kagi Chart.

1. Up Lines (Yang Lines) - Form during an uptrend.
2. Down Lines (Yin Lines) - Form during a downtrend.
3. Projected Up Lines - During an intraday timeframe, a potential up line that would form based on current price (before actual closing price is set).
4. Projected Down Lines - During an intraday timeframe, a potential down line that would form based on current price (before actual closing price is set).
5. Horizontal Lines - Lines drawn when a line changes direction. When an up line changes to a down line, the horizontal line is considered a shoulder. When a down line changes to an up line, the horizontal line is called a waist.
Uses of Kagi Charts

Kagi Charts are a popular charting choice because of their ease of interpretation. Because they do not take time intervals into consideration at all, they have a way of factoring out the associated noise. When price movement is the only variable that matters, the creation of new lines gains importance. Price movements typically need to be substantial to register a line change and therefore should always be noted. Natural, small price variations that occur naturally over time can therefore be disregarded. Some common, everyday applications for Kagi Charts are the basic line reversals trading signal, support and resistance discovery and a sequence based reversal pattern.

Up Line/Down Line Reversals - Steve Nison, who brought popularity to Kagi Charts, offered the most basic interpretation of the charts. It is simple, Buy on yang, sell on yin. Basically, that is buy on a reverse to an up line and sell on a reverse to a down line.

Support and Resistance - Kagi Charts oftentimes, reveal areas of support and resistance.

Nison himself proposed a trading signal which entails waiting for a sequence of nine (mostly) consecutive shoulders or waists. Traders should then look for a reversal opportunity after the ninth shoulder or waist is
drawn.

A series of over 9 (mostly) shoulders followed by a reversal.

Up Bars – Change the Color and Outline of Up Bars

Down Bars - Change the Color and Outline of Down Bars

Projected Up Bars - Change the Color and Outline of Projected Up Bars

Projected Down Bars - Change the Color and Outline of Projected Down Bars

Source - Determines what data from each period will be used in calculations. Close is the default.

Reversal Amount – This value sets the size of a move needed to draw a new line in a different direction.
Line Break Charts

Line Break Charts are a Japanese chart style similar to Kagi and Renko Charts, in that they disregard time intervals and only focus on price movements. Line Break Charts are constructed of a series of up bars and down bars (referred to as lines). Obviously up lines represent rising prices, while down lines represent falling prices. The key to using Line Break Charts is the user defined Number of Line setting. A Line Break Chart takes the current closing price and compares it to the closing price of a previous line. The most common Number of Line setting is 3. What this means is that the closing price of the current line is compared to the closing price of the line 2 period's ago. If the current price is higher it is an up line and if it is lower, it is a down line. If the current closing price is the same or the move in the opposite direction is not large enough to warrant a reversal then no new line is drawn.

There are only for types of lines

1. Up Lines - Form during an uptrend.
2. Down Lines - Form during a downtrend.
3. Projected Up Lines - During an intraday timeframe, a potential up line that would form based on current price (before actual closing price is set).
4. Projected Down Lines - During an intraday timeframe, a potential down line that would form based on current price (before actual closing price is set).

Very much like Kagi Charts and Renko Charts, Line Break Charts are popular because of the way that they filter out noise and make price movements easy to digest and understand. Some of the typical uses of Line Break Charts are; finding support and resistance, spotting breakouts, and discovering classic chart patterns.

Support and Resistance - Line Break Charts oftentimes reveal areas of support and resistance.
Breakouts – Breakouts occur when bars begin to generate in a defined direction after a period of trading within a support and resistance bound trading range.

Classic Chart Patterns - Charts that filter out time and only focus on price, such as Line Break Charts, classical chart patterns can often be spotted.
Up Bars – Change the Color and Outline of Up Bars

Down Bars - Change the Color and Outline of Down Bars

Projected Up Bars - Change the Color and Outline of Projected Up Bars

Projected Down Bars - Change the Color and Outline of Projected Down Bars

Source - Determines what data from each period will be used in calculations. Close is the default.

Reversal OF Line – This value sets the which previous line to compare the current line to.

Point and Figure (PnF) Charts
Point and Figure Charts (PnF) are another example of a chart type that relies solely on price movements and not time intervals during the creation of the chart. In this way, PnF Charts are similar to Renko, Kagi and Line Break Charts. A basic understanding of PnF Charts is that they are comprised of a series of columns made from either X's or O's. X columns represent rising prices, while columns consisting of O's denote falling prices. Point and Figure Charts were originally popular in the early 1900's before the prominence of computer based charting. They were a way for technical analysts to chart large amounts of data in a short period of time. With the rise of computers, PnF Charts fell out of favor for quite a while. However recently, PnF Charts are once again gaining in popularity. Overall, there is a renewed interest in "noise filtering" charts which focus on price movements alone.

The X's and O's that make up each column occupy a space called the "Box Size". The box size is a user determined value. When price moves enough in the same direction as the current column, a new X or O is added to that column. When price closes far enough away in the opposite direction, a new column begins with either an X or an O (The opposite of the previous column). The amount that price must move is determined by the reversal distance. This value is created by multiplying the box size by another user defined value, the "Reversal Amount". The reversal amount is the number of bricks price must move in order for a new letter to be drawn or a new column to be created. Therefore if the box size is set to 1 ($1) and the reversal amount is set to 3, then price must move $3 in order for a new letter to be added to the chart.

There are two rules regarding the letters and columns.

1. Each column has to be either X's or O's. There can never be two different letters in the same column.
2. X columns and O columns will always alternate. You will never see two X columns side by side and vice versa.

There are four different types of lines that can be drawn within a PnF Chart.

1. Up Bars - Form during an uptrend.
2. Down Bars - Form during a downtrend.
3. Projected Up Bars - During an intraday timeframe, a potential up line that would form based on current price (before actual closing price is set).
4. Projected Down Bars - During an intraday timeframe, a potential down line that would form based on current price (before actual closing price is set).

As with the other, previously mentioned "noise filtering" charts, Point and Figure Charts are gaining in popularity because they do not factor in time or minor, naturally occurring price movements. Proponents of these types of charts believe that this characteristic makes it easier to spot trends and anticipate future price movements. For example, Point and Figure charts are great for visualizing trend lines, support and resistance levels and breakouts.

Trend Lines - Point and Figure Charts were originally drawn by hand on graph paper. Because of their nature, 45 degree(ish) trend lines can form naturally. These are a good way to identify the overall trend which can be beneficial on its own as well as with additional tools or indicators.

Support and Resistance Levels – Frequently, when using Point and Figure Charts, trading ranges appear when bars are generated between levels of support and resistance.
Breakouts – Breakouts occur when boxes begin to generate in a defined direction after a period of trading within a support and resistance bound trading range.
Up Bars – Change the Color and Outline of Up Bars

Down Bars - Change the Color and Outline of Down Bars

Projected Up Bars - Change the Color and Outline of Projected Up Bars

Projected Down Bars - Change the Color and Outline of Projected Down Bars

Source - Determines what data from each period will be used in calculations. Close is the default.

Style – Can choose between ATR reversal distance calculation method and Traditional reversal distance calculation method

ATR Length – If ATR is the selected calculation method, this value will set the ATR look-back period. 14 is the default.

Reversal Amount – If Traditional is the selected calculation method, this value is the user defined reversal amount.

Renko Charts

Renko charts are a chart type that only measures price movement. Additional, more traditional charting elements such as time or volume are not present. The word renko is derived from the Japanese word “renga” which means “bricks”. Not so coincidentally, renko charts are constructed from a series of bricks whose creation is determined by fluctuations in price. The concept of renko bars is very straightforward. First, the size of the bricks is pre-determined by the user. Once price moves more than the user defined “brick size” either above or below the most recent brick, a new brick is added to the chart.
It is important to note that new bricks are only added when price movements completely “fill” the predetermined “brick size”. Prices may exceed the values of the previous brick (either above or below), however a new brick will not be formed until the price movement is large enough. For example, let’s say the brick size is set to 2 points and the last brick covers prices of $52 to $54. The new brick won’t be formed until prices close either at or above $56 or at or below $50. If price closes above $56, for example $57; the new brick must still stop at $56.

There are two rules regarding brick placement:

1. Bricks will always have their corners touching.
2. There can never be more than one brick in any one vertical column.

There are four different types of bricks generated by a tradingview.com renko chart.

1. Up Bricks – Bricks that forms above the previous brick.
2. Down Bricks – Bricks that form below the previous brick
3. Projection Up Bricks – During an intraday timeframe, a potential up brick that would form based on current price (before actual closing price is set).
4. Projection Down Bricks – During an intraday timeframe, a potential down brick that would form based on current price (before actual closing price is set).

Traders who use Renko charts typically do so because they are easy to use and interpret. They are also different than a typical candlestick chart because they filter out all other variables besides price movement. There are many uses for Renko Charts. Some of the more popular are; discovering basic support and resistance levels, breakouts, and generating signals with additional indicators.

Support and Resistance Levels – Frequently, when using Renko Charts, trading ranges appear when bars are generated between levels of support and resistance.
Breakouts – Breakouts occur when bars begin to generate in a defined direction after a period of trading within a support and resistance bound trading range.

Overbought/Oversold – A good example of using additional indicators within a renko chart to identify trade signals would be using the RSI in conjunction with renko bars to define overbought or oversold levels.
Up Bricks – Change the Color and Outline of Up Bricks

Down Bricks - Change the Color and Outline of Down Bricks

Projected Up Bricks - Change the Color and Outline of Projected Up Bricks

Projected Down Bricks - Change the Color and Outline of Projected Down Bricks

Source - Determines what data from each period will be used in calculations. Close is the default.
Style – Can choose between ATR brick calculation method and Traditional brick calculation method

ATR Length – If ATR is the selected brick calculation method, this value will set the ATR look-back period. 14 is the default.

Brick Size – If Traditional is the selected brick calculation method, this value is the user defined brick size.

Spread Charts

The most basic definition of a spread chart is that it is a comparison between a financial instrument (such as a stock) and an additional variable (such as another financial instrument or a numerical value). Trading using spreads has been gaining in popularity because they provide a new perspective of a financial instrument's value and can also help to alleviate some risk. There are a few different ways to utilize a spread chart. Some of the more popular ones are; price inversions, currency conversions, financial instrument comparisons and pairs trading.

To create your own custom spread chart in TradingView;

1. Enter the first variable (symbol, number etc.) in the symbol entry window in the upper left hand corner and follow it with a space.
2. Enter one of four operators; (-) for subtraction, (+) for addition, (*) for multiplication or (/) for division and follow it with a space.
3. Enter the second variable (symbol, number etc.) in the symbol entry window in the upper left hand corner and press the enter key.

For Example: Entering AAPL / XAUUSD will create a comparison of Apple vs. Gold by dividing Apple prices by Gold prices.

Spreads for intraday charts are calculated by taking the Open, High, Low, and Close of each 1-minute bar and then recompiled into the selected interval. This approach is the only one that results in correct spread charts. We handle all necessary calculations on our servers and display the finished spread chart in your browser.

Inverting a chart is a good way to visually chart the correlation between two instruments. For example, with two instruments with very low correlation, inverting one of the instruments with this method will make them viewable moving in the same direction.

For example an inversion of EURUSD: 1/EURUSD
Multiplying or dividing an instrument by a currency pair will allow you to view the price of the instrument in a different currency.

For Example Best Buy shown in Euros: BBY/EURUSD

A common way to utilize spreads is to divide one instrument by another. This will give you spread value that can be tracked like a single instrument.

For Example Apple vs. Gold: AAPL/XAUUSD
Geometrics

Circle Lines

Circle Lines allow the user to set two vertical lines a specified distance apart. Once the lines are set, repeating vertical lines will appear equidistant apart and will appear indefinitely into the future. What this means is that as time goes on (and price changes), or even if the user just scrolls forward in time, the vertical lines will keep appearing. They will always have the same amount of space between them as the first two lines placed by the user. This can be useful for setting up custom trade sessions or intervals. It helps to visually break up the chart (in regards to time) in a manner that would not necessarily be available to the user by default.
Fib Circles

Fibonacci Circles are another indicator based on the Fibonacci Sequence used in technical analysis. They are created by first drawing a trend line between two extreme points. Circles are drawn at 11 different levels including the key Fibonacci Ratios of 23.6%, 38.2%, 61.8% and 100%.

It is important to note, that "typical" levels are used by default. The user has the ability to format the tool to show/hide specific levels as well as manually change level values and save those changes as templates.

Some of the circles might not be visible, because of the scale limitations of the chart window.

Fibonacci Circles can indicate support and resistance levels. Usually the price remains above the higher circle. If the higher circle is penetrated, prices generally fall to the lower circle, which in many cases, becomes the support level. If prices break below the higher circle, fall to the lower circle, and then begin to rise, the lower circle becomes the resistance level.

Fib Retracement

Fibonacci Retracements are an extremely popular in technical analysis. They are created by first drawing a trend line between two extreme points. The vertical distance between those two points is then divided up vertically with horizontal lines placed at key levels. Those levels are placed at the key Fibonacci Ratios of 23.6%, 38.2%, 61.8% and 100%.

It is important to note, that these are typical levels. By default, TradingView offers 11 levels which is much more than the 4 mentioned (thought those specific 4 are included). The user has the ability to format the tool to show/hide levels as well as manually change level values and save those changes as templates.

The main use of these levels is that they act as levels of support and/or resistance when price is retracting back from an original advance or decline. These are key levels to take note of when price is correcting or experiencing a counter-trend bounce. The idea is that after an initial move (either a decline or an advance), price will often retrace back towards the direction it came from. The areas or levels defined by the retracement values can give the analyst a better idea about future price movements. Remember that
as price moves, levels that were once considered to be resistance can switch to being support levels. The opposite is also true.

**Fib Speed Resistance Arcs**

Fibonacci Speed Resistance Arcs are used in technical analysis to determine the direction and speed of the trend reversals and also indicate the support/resistance levels. The first step is drawing a trend line between two extreme points (for example a peak and a valley). Then arcs are created and intersect the trend/speed line at the selected distance percentages between the beginning and the end of this trend line. Typical Fibonacci percentage ratios are used however TradingView allows users to manually select whichever percentages they wish to use (up to 11 of them).

Some of the arcs might not be visible, because of the scale limitations of the chart window.

The Fibonacci Speed/Resistance Arcs can indicate support and resistance levels. Usually the price remains above the higher arc. If the higher arc is penetrated, prices generally fall to the lower arc, which in many cases, becomes the support level. If prices break below the higher arc, fall to the lower arc, and then begin to rise, the lower arc becomes the resistance level.

**Fib Speed Resistance Fan**

Speed Resistance Fans are tools used technical analysis to identify support and resistance levels of a trend and the price level a trend correction may rise or fall. A Speed Resistance Fan consists of a trend line on which speed resistance lines are drawn above (which represent time) and below (which represent price). These lines are drawn based on time/price percentages of the distance between the beginning and end of the trend line. The most common speed line percentages used by analysts are one-third and two-thirds. Fibonacci Ratios are frequently used.
Speed lines are a combination of trend line and percentage retracement analysis. Speed resistance lines not only help to measure trend corrections (percentage retracement) but also measure the speed of a trend.

Speed Resistance Fan lines can also be viewed as support or resistance lines. In an uptrend, price usually stays above the higher speed line. If this line is penetrated, prices generally fall to the lower speed line, which in many cases becomes the support level. However, if prices break below the higher speed line, fall to the lower speed line, and then begin to rise, the lower speed line becomes the resistance level. In a downtrend, the breaking of a lower speedline indicates a possible rise or rally to a higher line. If a breakout occurs above that line, the rally may continue to the top of the prior trend (or the underlying trend line).

**Fib Time Zone**

Fib Time Zone is a technical analysis tool consisting of a series of are vertical lines which extend along the x (horizontal) axis. This lines are placed according to the Fibonacci sequence. The main function of the Fibonacci Time Zone tool is to forecast or anticipate potential reversals based on elapsed time.

The first few Fibonacci numbers create relatively tight Fibonacci Time Zones at the beginning of the chart. Because of this it may be necessary to ignore the first few zones. After the first few zones, the zones expand quickly and allows some breathing room as the sequence unfolds. The basic theory behind Fib Time Zones is that potential reversal points can be found by looking ahead to the starting point of new zones.

Fibonacci Time Zone parameters are defined by the Fibonacci Sequence. Starting with 0 and 1, each number is the sum of the two prior numbers (1+2=3, 2+3=5, 5+8=13 8+13=21 etc…).

**Gann Fan**
Gann Fans are technical analysis tools which were developed by the famous 20th century technical analyst W.D. Gann around 1935. A Gann fan is comprised of a series of nine diagonal lines called Gann angles. These angles are drawn over a price chart, designed to show different support and resistance levels of a financial instrument.

Each Gann angle (which extends indefinitely) divides time and price into proportionate parts. The most noteworthy Gann angle is the 1x1 or the 45° angle. According to Gann the 1x1 angle represents one unit of price for one unit of time. The idea behind the 1x1 line is that it is a perfect 45° which ascends 1 point every 1 day. There are additional important angles such as the 2x1 (moving up two points per day), the 3x1, the 4x1, the 8x1, and the 16x1. All of these different Gann angle lines combine to create the Gann Fan.

Fans are typically drawn from changes in trend such as tops or bottoms and are a good way to measure a market's trend or strength. During an uptrend, if price stays in the space above an ascending angle without breaking below it, the market is considered bullish. During a downtrend, if price remains below a descending angle without breaking above it, the market is considered bearish.

The angle that is above or below current prices determines the perceived relative strength or weakness of the market. For example, if the price is above the 2x1 the market has shown itself to be much more bullish than if it is above the 1x1. Gann believed that when an up trending price reverses and breaks under an ascending angle, the tendency of the price is to go to the next nearest angle below it. The opposite is also true. When a down trending price reverses and breaks up through a descending angle, the tendency of the price is to go to the next nearest angle above it.

Inside Pitchfork

The Inside Pitchfork is a drawing tool used in technical analysis that is derived from the standard pitchfork. There are three basic components of a standard pitchfork. There is a center median line (trend line) as well as two more sets of lines above and below that median line. The additional lines are set a specified number of standard deviations away from the median. Where the Inside Pitchfork differs is that
its origin’s location is modified from a standard pitchfork. The Inside Pitchfork’s origin is located at 1/2 the vertical distance and 1/2 the horizontal distance between the high and low points (first two points set).

An Inside pitchfork (just like a standard pitchfork) is created by first drawing a trend line between two extreme points. A third point is then set either above or below the second point depending on the analyst’s desired Inside Pitchfork location. Keep in mind that the default Inside Pitchfork setting calls for two additional sets of lines to be drawn. Tradingview allows for up to 9 sets of lines to be added. If additional lines are added, the user can save this setup as a template for later use.

The basic idea behind the use of an Inside Pitchfork and a standard pitchfork is that it essentially creates a type of trend channel. A trend is considered active as long as price stays within the Inside Pitchfork channel. Reversals occur when price breaks out of an Inside Pitchfork channel.

**Pitchfork**

Pitchfork is a drawing tool that is popular in technical analysis. There are three basic components of a pitchfork. There is a center median line (trend line) as well as two more sets of lines above and below that median line. The additional lines are set a specified number of standard deviations away from the median.

A pitchfork is created by first drawing a trend line between two extreme points. A third point is then set either above or below the second point depending on the analyst’s desired pitchfork location. Keep in mind that the default pitchfork setting calls for two additional sets of lines to be drawn. Tradingview allows for up to 9 sets of lines to be added. If additional lines are added, the user can save this setup as a template for later use.

The basic idea behind the use of a pitchfork is that it essentially creates a type of trend channel. A trend is considered active as long as price stays within the Pitchfork channel. Reversals occur when price breaks out of a Pitchfork channel.
Schiff Pitchfork

The Schiff Pitchfork is a drawing tool used in technical analysis that is derived from the standard pitchfork. There are three basic components of a standard pitchfork. There is a center median line (trend line) as well as two more sets of lines above and below that median line. The additional lines are set a specified number of standard deviations away from the median. Where the Schiff Pitchfork differs is that its origin’s location is modified from a standard pitchfork. The Schiff Pitchfork’s origin is located at 1/2 the vertical distance and 1/2 the horizontal distance between the high and low points (first two points set).

A Schiff pitchfork (just like a standard pitchfork) is created by first drawing a trend line between two extreme points. A third point is then set either above or below the second point depending on the analyst’s desired Schiff Pitchfork location. Keep in mind that the default Schiff Pitchfork setting calls for two additional sets of lines to be drawn. Tradingview allows for up to 9 sets of lines to be added. If additional lines are added, the user can save this setup as a template for later use.

The basic idea behind the use of a Schiff Pitchfork and a standard pitchfork is that it essentially creates a type of trend channel. A trend is considered active as long as price stays within the Schiff Pitchfork channel. Reversals occur when price breaks out of a Schiff Pitchfork channel.
Trend-Based Fib Time

Fibonacci Trend-Based Time Lines is an analytical drawing tool used to predict the future price movements and examine the support and resistance levels as well as price breakouts. It is represented by a series of vertical lines at date/time levels that shows probable price corrections in an existing trend. First, a trend line is drawn. Depending on its length and direction, vertical lines are drawn based on the selected distance percentages or on the Fibonacci percentages.

Support indicates a low or series of troughs where price activity has not penetrated. Resistance indicates a high or series of peaks where price activity has not penetrated.

Lines and Rays

Arrow

The arrow drawing tool is used simply to point out features of the chart, typically either price movements or indicator/study movements.
Extended Line

The extended line drawing tool allows you to place a line on your chart which extends indefinitely in any direction. This could be used to create your own trend line or trend channel. The key feature is that it extends indefinitely. What this means, is that no matter how far into the future or past you move the chart, the line will still be visible, extending at the same angle as its origin.

Horizontal Line

Horizontal lines are often used to make note of a specific price. They can also be very useful when marking off levels of support and or resistance. Much like extended lines, horizontal lines continue on in their respective direction indefinitely.
Horizontal Ray

The Horizontal Ray drawing tool is similar to the horizontal line except that it only extends in one direction. The user places the origin of the ray at their discretion and the ray continues in the desired direction indefinitely.

Parallel Channel

The parallel channel drawing tool is primarily used to distinguish trends of price movement. The parallel channel tool has the ability to extend either to the right, left or both directions, if the user wants to continue the channel indefinitely.
Ray

The ray is similar to the horizontal ray except that it can be orientated in any direction. The user places the origin at any location on the chart and the ray will extend in the direction of their choosing indefinitely.

Regression Trend

Regression Trends can be used in a way similar to parallel channels. The main difference is that there are upper and lower bands which are set a user defined number of standard deviations away from a base line. This is a good tool to use to determine when a price is unusually far away from its baseline.
Trend Line

The Trend Line drawing tool has several useful applications. It is predominantly used to manually draw lines illustrating trends in the market or associated indicators. It can also be used as arrows (there is an option to put an arrow on one or both ends) which are used to designate points of interest.

Vertical Line

Vertical lines are often used to make note of a time within the data series.
Marks

Arrow Marks

This drawing tool is a basic identifier. You have the option of arrow left, right, up or down. It is used to point out or identify various characteristics of a chart.

Price Label

Price labels allow the user to point out a specific price on the chart. The price label tool includes a text box which contains price as well as a "point" to pinpoint exact location.
Patterns and Waves

ABCD Pattern

The ABCD Pattern drawing tool allows analysts to highlight various four point chart patterns. Users can manually draw and maneuver the four separate points (ABCD). The ABCD points create three separate legs which combine to form chart patterns. The three legs are referred to as AB, BC, and CD.

Each of the four points (ABCD) represent a significant high or low in terms of price on the chart. Therefore, the three previously mentioned legs (AB, BC, CD) represent different trends or price movements which move in opposite directions.

As a result there are three major ABCD chart patterns that are most common. These patterns can be either bullish or bearish. It is important to note that it would be extremely rare for line lengths and ratios to ever be exactly equal. Technical analysis such as this is simply not an exact science. Because of this, some experimentation may be necessary.

The three major patterns include:

AB=CD

Classic ABCD

ABCD Extension

AB=CD

Both the time and length of AB equal the time and length of CD.

Classic ABCD
CD should be either 127.2% or 161.8% of BC

ABCD Extension

CD should be either 127.2% or 161.8% of AB

**Elliott Major Retracement**

Elliott Major Retracement allows the user to manually draw the 3 point retracement (corrective waves) for Major, Intermediate and Minor Degree Elliot Waves.

TradingView does offer an Elliott Wave indicator which will automatically overlay Elliot Waves and their associated points onto a chart. However, as with any indicator, coordinates may need to be adjusted. Technical analysis is obviously not an exact science. Therefore, analysts need to be able to adapt and make changes to their analysis on the fly. Some traders may decide that manually drawing Elliot Waves is the better option for their trading style.

Elliott Waves, in their most basic and straightforward form, consist of 8 points. The first 5 points are marked by numbers and create what is known as impulse waves. These are waves that move along with the trend. The last 3 points are marked with letters and create what are known as corrective waves. These are waves that retrace back against the trend.

Elliott Waves are classified by their Degrees. Degrees are determined by the duration of the trend and therefore the length of the wave pattern. In every degree category, impulse wave points are designated by numbers, while corrective wave points are designated by letters.

From largest to smallest, Degrees are typically classified and designated as:

- GrandSuper Circle - ((I)) ((II)) ((III)) ((IV)) ((V)) ((a)) ((b)) ((c))
- SuperCircle - (I) (II) (III) (IV) (V) (a) (b) (c)
- Circle - I II III IV V a b c
- Major - ((1)) ((2)) ((3)) ((4)) ((5)) ((A)) ((B)) ((C))
- Intermediate - (1) (2) (3) (4) (5) (A) (B) (C)
- Minor - 1 2 3 4 5 A B C
- Minute - (ii) (iii) (iv) (v) ((a)) ((b)) ((c))
- Minuette - (i) (ii) (iii) (iv) (v) (a) (b) (c)
- Subminuette - i ii iii iv v a b c

**Elliott Minor Retracement**

Elliott Minor Retracement allows the user to manually draw the 3 point retracement (corrective waves) for GrandSuper Circle, SuperCircle, Circle, Minute, Minuette, and Subminuette Degree Elliot Waves.

TradingView does offer an Elliott Wave indicator which will automatically overlay Elliot Waves and their associated points onto a chart. However, as with any indicator, coordinates may need to be adjusted. Technical analysis is obviously not an exact science. Therefore, analysts need to be able to adapt and
make changes to their analysis on the fly. Some traders may decide that manually drawing Elliot Waves is the better option for their trading style.

Elliot Waves, in their most basic and straightforward form, consist of 8 points. The first 5 points are marked by numbers and create what is known as impulse waves. These are waves that move along with the trend. The last 3 points are marked with letters and create what are known as corrective waves. These are waves that retrace back against the trend.

Elliot Waves are classified by their Degrees. Degrees are determined by the duration of the trend and therefore the length of the wave pattern. In every degree category, impulse wave points are designated by numbers, while corrective wave points are designated by letters.

From largest to smallest, Degrees are typically classified and designated as:

**GrandSuper Circle** - (((I))) (((II))) (((III))) (((IV))) (((V))) ((a)) ((b)) ((c))

**SuperCircle** - (I) (II) (III) (IV) (V) (a) (b) (c)

**Circle** - I II III IV V a b c

**Major** - ((1)) ((2)) ((3)) ((4)) ((5)) ((A)) ((B)) ((C))

**Intermediate** - (1) (2) (3) (4) (5) (A) (B) (C)

**Minor** - 1 2 3 4 5 A B C

**Minute** - ((i)) ((ii)) ((iii)) ((iv)) ((v)) ((a)) ((b)) ((c))

**Minuette** - (i) (ii) (iii) (iv) (v) (a) (b) (c)

**Subminuette** - i ii iii iv v a b c

**Elliott Wave Circle**

Elliot Wave Circle allows the user to manually draw the 5 point impulse waves for Circle Degree Elliot Waves.
TradingView does offer an Elliott Wave indicator which will automatically overlay Elliot Waves and their associated points onto a chart. However, as with any indicator, coordinates may need to be adjusted. Technical analysis is obviously not an exact science. Therefore, analysts need to be able to adapt and make changes to their analysis on the fly. Some traders may decide that manually drawing Elliot Waves is the better option for their trading style.

Elliot Waves, in their most basic and straightforward form, consist of 8 points. The first 5 points are marked by numbers and create what are known as impulse waves. These are waves that move along with the trend. The last 3 points are marked with letters and create what are known as corrective waves. These are waves that retrace back against the trend.

Elliot Waves are classified by their Degrees. Degrees are determined by the duration of the trend and therefore the length of the wave pattern. In every degree category, impulse wave points are designated by numbers, while corrective wave points are designated by letters.

From largest to smallest, Degrees are typically classified and designated as:

GrandSuper Circle - ((I)) ((II)) ((III)) ((IV)) ((V)) ((a)) ((b)) ((c))

SuperCircle - (I) (II) (III) (IV) (V) (a) (b) (c)

Circle - I II III IV V a b c

Major - ((1)) ((2)) ((3)) ((4)) ((5)) ((A)) ((B)) ((C))

Intermediate - (1) (2) (3) (4) (5) (A) (B) (C)

Minor - 1 2 3 4 5 A B C

Minute - (i) (ii) (iii) (iv) (V) (a) (b) (c)

Minuette - (i) (ii) (iii) (iv) (v) (a) (b) (c)
**Elliott Wave Minor**

Elliott Wave Minor allows the user to manually draw the 5 point impulse waves for Minor Degree Elliot Waves.

TradingView does offer an Elliott Wave indicator which will automatically overlay Elliot Waves and their associated points onto a chart. However, as with any indicator, coordinates may need to be adjusted. Technical analysis is obviously not an exact science. Therefore, analysts need to be able to adapt and make changes to their analysis on the fly. Some traders may decide that manually drawing Elliot Waves is the better option for their trading style.

Elliot Waves, in their most basic and straightforward form, consist of 8 points. The first 5 points are marked by numbers and create what are known as impulse waves. These are waves that move along with the trend. The last 3 points are marked with letters and create what are known as corrective waves. These are waves that retrace back against the trend.

Elliot Waves are classified by their Degrees. Degrees are determined by the duration of the trend and therefore the length of the wave pattern. In every degree category, impulse wave points are designated by numbers, while corrective wave points are designated by letters.

From largest to smallest, Degrees are typically classified and designated as:

**GrandSuper Circle** - ((I)) ((II)) ((III)) ((IV)) ((V)) ((a)) ((b)) ((c))

**SuperCircle** - (I) (II) (III) (IV) (V) (a) (b) (c)

**Circle** - I II III IV V a b c

**Major** - (1) (2) (3) (4) (5) (A) (B) (C)

**Intermediate** - (1) (2) (3) (4) (5) (A) (B) (C)
Minor - 1 2 3 4 5 A B C

Minute - (i) (ii) (iii) (iv) (v) (a) (b) (c)

Minuette - (i) (ii) (iii) (iv) (v) (a) (b) (c)

Subminuette i ii iii iv v a b c

Elliot Wave Subminuette

Elliot Wave Subminuette allows the user to manually draw the 5 point impulse waves for Subminuette Degree Elliot Waves.

TradingView does offer an Elliott Wave indicator which will automatically overlay Elliot Waves and their associated points onto a chart. However, as with any indicator, coordinates may need to be adjusted. Technical analysis is obviously not an exact science. Therefore, analysts need to be able to adapt and make changes to their analysis on the fly. Some traders may decide that manually drawing Elliot Waves is the better option for their trading style.

Elliot Waves, in their most basic and straightforward form, consist of 8 points. The first 5 points are marked by numbers and create what are known as impulse waves. These are waves that move along with the trend. The last 3 points are marked with letters and create what are known as corrective waves. These are waves that retrace back against the trend.

Elliot Waves are classified by their Degrees. Degrees are determined by the duration of the trend and therefore the length of the wave pattern. In every degree category, impulse wave points are designated by numbers, while corrective wave points are designated by letters.

From largest to smallest, Degrees are typically classified and designated as:
Head & Shoulders

The Head & Shoulders drawing tool allows users to visually identify potential Head & Shoulder chart patterns.

The Head & Shoulders pattern is a formation which consists of three distinct sections or shapes; a left shoulder, a head, and a right shoulder. There is also a horizontal line which creates the base for the three shapes. The line is known as the neckline. This pattern can be both bullish as well as bearish. For the example below, we will list the conditions of the Head & Shoulders Top which is the bearish setup. For the Head & Shoulders Bottom (bullish setup), the inverse of all of the following conditions is true.

Head & Shoulders Top (Bearish)

The left shoulder forms at the end of an extensive advance in price. The move generally occurs during a period of high volume. After the move up (peak), price declines to an extent to form a valley.
From the valley formed at the end of the left shoulder's formation, price then rises once again to a level that is higher than the peak of the left shoulder. This move is accompanied by either normal or high volume. Then, just like the left shoulder, price then reacts and falls again on low volume. The valley should be right around the same level as the previous valley formed at the end of the formation of the left shoulder.

The right shoulder then begins formation. The right shoulder in general is formed on lower volume than both the left shoulder and the head. The key aspect of the right shoulder is that its peak must be lower than the peak of the head.

Once both shoulders and the head are formed, the pattern is essentially complete. For the formation to be valid, a horizontal line known as the neckline should be able to cross through all three sections with the two valleys between the head and both shoulders resting on the line.

Now that the Head & Shoulders pattern has been formed, all that's left is price confirmation. If price proceeds to fall below the neckline, this is considered to be confirmation of the bearish setup.

Three Drivers Pattern

The Three Drivers drawing tool allows users to visually identify potential Three Drivers chart patterns.

The Three Drivers setup or pattern is a rare occurrence because it requires symmetry in terms of both price as well as time. The pattern consists of a series of drives and retracements. There are five total points that make up a Three Drive formation. Three points (1, 2, 3) designate the end of the three drives which move along with the trend. Two points (A, C) mark the ending points of two retracements which occur in between the drives. The idea behind the Three Drive setup is that at the conclusion of the third drive (which moves with the current trend), price will then reverse in the opposite direction. The pattern, of course, can be either bullish or bearish. The example below outlines the parameters of the bullish setup. The bearish setup would simply be the inverse of these conditions.

Bullish Three Drivers Pattern

Always remember that symmetry of both price and time are of extreme importance in this pattern's formation.

Drives 2 and 3 should be specific extensions of the A and C retracements. The extensions should be 127.2% or 161.8%.

The A and C retracements will typically be either 61.8% or 78.6% of the previous swings. The possible exception is in strongly trending markets. If the market is trending strongly, these retracements may be only 38.2% or 50%.

The times (horizontal distances) of the A and C retracements should be as close to symmetrical as possible. The same is true for the extensions (the second and third drives to the bottom).

It is important to remember that this particular pattern is rare. This means that traders should not try to force the pattern onto the chart. If the formation contains price gaps or it is not symmetrical enough (slight variations are ok), it is best to abandon the formation and move on.
**Triangle Pattern**

The Triangle Pattern drawing tool allows users to visually identify potential Triangle chart patterns.

Triangles are a popular pattern that analysts frequently use to anticipate potential price reversals. The Triangle Pattern drawing tool allows you to plot four points (A, B, C, D) in order to overlay a triangle onto the candlesticks of a price chart. The idea is to place the points on four alternating highs and lows. That is to say, points A and C would be on consecutive highs (or lows) and B and D would be then be on consecutive lows (or highs).

There are a few different types of triangle patterns to look for. The main differentiation between the types of triangles is the angle between the consecutive high points in relation to the angle between the consecutive low points. That is to say, what direction does the AC line move in when compared to the movement of the BD line?

The three types of triangles

1. **Symmetrical Triangle** - Characterized by the convergence of a support line and a resistance line into a point (the apex). In a symmetrical triangle the slopes of the two lines should be similar and as close to identical as possible. Price will then bounce between support and resistance before finally breaking out at the end. Generally speaking, the symmetrical triangle is regarded as a continuation pattern. This means that if the triangle is preceded by an uptrend, when price finally breaks out, it will continue upwards. If preceded by a downtrend, the opposite is true. Of course no rule in trading is always true. If price breaks out in the opposite direction of the previous trend, it should be considered the start of a new trend altogether.

2. **Ascending Triangle** - A bullish triangle pattern characterized by the AC line forming a flat level of resistance and the BD line forming an ascending support line. Price will bounce back and forth between support and resistance levels before ultimately breaking out above the flat resistance line. There is also the possibility that price may break below the ascending support line therefore breaking the pattern. Because the breakout can be in the unexpected direction, it is usually advised to wait until breakout confirmation before entering a position. Trading in advance of a breakout can be dangerous.

3. **Descending Triangle** - A bearish triangle pattern characterized by the BD line forming a flat level of resistance and the AC line forming a descending support line. Price will bounce back and forth between support and resistance levels before ultimately breaking out below the flat resistance line. There is also the possibility that price may break above the descending support line therefore breaking the pattern. Because the breakout can be in the unexpected direction, it is usually advised to wait until breakout confirmation before entering a position. Trading in advance of a breakout can be dangerous.

**XABCD Pattern**

The XABCD Pattern drawing tool allows analysts to highlight various five point chart patterns. Users can manually draw and maneuver the five separate points (XABCD). The XABCD points create four separate legs which combine to form chart patterns. The four legs are referred to as XA, AB, BC, and CD.

Each of the five points (XABCD) represent a significant high or low in terms of price on the chart. Therefore, the four previously mentioned legs (XA, AB, BC, CD) represent different trends or price movements which move in opposite directions.
As a result there are four major XABCD chart patterns that are most common. These patterns can be either bullish or bearish.

The four major patterns include:

1. Gartley
2. Butterfly
3. Crab
4. Bat

Gartley

For this example we will examine a Bullish Gartley Pattern

The pattern begins with an uptrend designated as XA

Price reverses back down at A and stops at B. The Fibonacci Retracement ration of AB should be 61.8% of the price range of A minus X.

Price reverses at B. The BC retracement should be between 61.8% and 78.6% of the AB price range (not the length of the lines). This is shown along the line AC.

At C, price reverses with retracement CD between 127% and 161.8% of the range BC. This is shown along the line BD.

Price D is the point to enter the market (buy).

Butterfly

For this example we will examine a Bullish Butterfly Pattern

The swing from A to D should be a 127.2% or 161.8% extension of the XA line

Within the A to D swing, a valid ABCD pattern must be observed.

In an ideal setup, the two triangles (XAB and BCD) should be almost equal in terms of time. If not look for the second triangle (BCD) to be between 61.8% and 161.8% of the first triangle (XAB).

A move beyond 161.8% would suggest that the bullish pattern is broken and bearish movement may be inevitable.

Crab

AB should be the 0.382 or 0.618 retracement of the XA line.

BC should be either the 0.382 or 0.886 retracement of the AB line.

CD is the 2.24 or 3.618 extension of the BC line.

Bat

AB is the 0.382 or 0.500 retracement of the XA line.
BC is the 0.382 or 0.886 retracement of the AB line.

CD can be either the 1.618 or 2.618 extension of the BC line.

**Positions and Forecasting**

**Date Range**

This tool allows the user to place points horizontally on two different dates. A shaded box will then appear showing the range of the dates. Text will also appear below the box displaying the number of bars as well as time elapsed during the date range.

**Forecast**

Forecast is a highly useful drawing tool, especially when used in the context of sharing trade ideas with the rest of the TradingView community. Forecast allows the user to place an entry and an exit price for a trade. However, it also allows the user to define the trade's duration by extending the forecast line. As time progresses (and prices change), the forecast will automatically be deemed a "success" or a "failure".
Long Position

The Long Position tool allows the user to set an entry point and assume a long position from that point. Extending above and below that price level will be two boxes; green for the profit zone and red for the loss zone. Both zones can be manually adjusted by the user to change the risk/reward ratio.

Price Range

This tool allows the user to place points vertically on two different prices. A shaded box will then appear showing the range of the prices. Text will also appear along the box displaying the total size of the price move in terms of actual share price as well as percentage.
Projection

The projection tool allows the user to make a projection for price moving forward. The user places a point of origin on the chart. A second point must be placed (moving horizontally to the right) somewhere in the future. Finally, the third point should be placed at an estimated price. This will complete the projection drawing.

Short Position

The Short Position tool allows the user to set an entry point and assume a short position from that point. Extending above and below that price level will be two boxes; green for the profit zone and red for the loss zone. Both zones can be manually adjusted by the user to change the risk/reward ratio.
Shapes

Arc

Allows the user to draw an arc on the chart. A common use for this feature would be using the arc to highlight patterns on the chart. For example, the cup and handle chart pattern.

Ellipse

An Ellipse is typically used to highlight or circle areas on a chart. For example, price gaps, peaks and valleys or overbought and oversold conditions.
Polyline

The polyline drawing tool is a way to draw a custom shape while still using straight lines. Any shape made from straight lines can be drawn and once two lines are connected at a single point, the shape will be completed.

Rectangle

A simple drawing tool used to draw rectangles on the chart. Typically used to highlight areas of interest.
Triangle

A simple drawing tool used to draw rectangles on the chart. Typically used to highlight areas of interest. They can even be used to highlight classic chart patterns.

Text

Balloon

A text balloon which allows the user to make a smaller, more direct notation than a full text box. The "point" on the balloon also allows the notation to be placed much more specifically than a text box.
Callout

This tool is similar to a balloon. It allows for a the user to extend the point from a specific location for a more customized placement.

Indicators and Overlays

Accumulation Distribution (ADL)

Accumulation Distribution Indicator or ADL (Accumulation Distribution Line) is a volume based indicator which was essentially designed to measure underlying supply and demand. It accomplishes this by trying
to determine whether traders are actually accumulating (buying) or distributing (selling). This is accomplished by plotting a running total of each period’s Money Flow Volume. ADL can reveal divergences between volume flow and actual price to primarily either affirm a current trend or to anticipate a future reversal.

**Aroon**

The Aroon Indicator (often referred to as Aroon Up Down) is a range bound, technical indicator that is actually a set of two separate measurements designed to measure how many periods have passed since price has recorded an n-period high or low low with “n” being a number of periods set at the trader’s discretion. For example a 14 Day Aroon-Up will take the number of days since price last recorded a 14 day high and then calculate a number between 0 and 100. A 14 Day Aroon-Down will do the same thing except is will calculate a number based of the number of days since a 14 day low. This number is intended to quantify the strength of a trend (if there is one). The closer the number is to 100, the stronger the trend. Aroon is not only good at identifying trends, it is also a useful tool for identifying periods of consolidation.

**Average True Range (ATR)**

The Average True Range (ATR) is a tool used in technical analysis to measure volatility. Unlike many of today's popular indicators, the ATR is not used to indicate the direction of price. Rather, it is a metric used solely to measure volatility, especially volatility caused by price gaps or limit moves.

**Awesome Oscillator (AO)**

The Awesome Oscillator is an indicator used to measure market momentum. AO calculates the difference of a 34 Period and 5 Period Simple Moving Averages. The Simple Moving Averages that are used are not calculated using closing price but rather each bar’s midpoints. AO is generally used to affirm trends or to anticipate possible reversals.

**Bollinger Bands %B (%B)**

Bollinger Bands %B or Percent Bandwidth (%B) is an indicator derived from the standard Bollinger Bands indicator. Bollinger Bands are a volatility indicator which creates a band of three lines which are plotted in relation to a security's price. The Middle Line is typically a 20 Day Simple Moving Average. The Upper and Lower Bands are typically 2 standard deviations above and below the SMA (Middle Line). What the %B indicator does is quantify or display where price is in relation to the bands. %B can be useful in identifying trends and trading signals.

**Bollinger Bands (BB)**

Bollinger Bands (BB) are a widely popular technical analysis instrument created by John Bollinger in the early 1980’s. Bollinger Bands consist of a band of three lines which are plotted in relation to security prices. The line in the middle is usually a Simple Moving Average (SMA) set to a period of 20 days (The type of trend line and period can be changed by the trader; however a 20 day moving average is by far the most popular). The SMA then serves as a base for the Upper and Lower Bands. The Upper and Lower Bands are used as a way to measure volatility by observing the relationship between the Bands and price. Typically the Upper and Lower Bands are set to two standard deviations away from the SMA (The Middle Line); however the number of standard deviations can also be adjusted by the trader.

**Bollinger Bands Width (BBW)**
Bollinger Bands Width (BBW) is a technical analysis indicator derived from the standard Bollinger Bands indicator. Bollinger Bands are a volatility indicator which creates a band of three lines which are plotted in relation to a security's price. The Middle Line is typically a 20 Day Simple Moving Average. The Upper and Lower Bands are typically 2 standard deviations above and below the SMA (Middle Line). Bollinger Bands Width serve as a way to quantitatively measure the width between the Upper and Lower Bands. BBW can be used to identify trading signals in some instances.

Chaikin Money Flow (CMF)

Chaikin Money Flow (CMF) is a technical analysis indicator used to measure Money Flow Volume over a set period of time. Money Flow Volume (a concept also created by Marc Chaikin) is a metric used to measure the buying and selling pressure of a security for single period. CMF then sums Money Flow Volume over a user determined look-back period. Any look-back period can be used however the most popular settings would be 20 or 21 days. Chaikin Money Flow's Value fluctuates between 1 and -1. CMF can be used as a way to further quantify changes in buying and selling pressure and can help to anticipate future changes and therefore trading opportunities.

Chaikin Oscillator

The Chaikin Oscillator is, at its core, an indicator of an indicator. The Chaikin Oscillator takes Accumulation/Distribution (ADL) and applies two Exponential Moving Averages of varying length to the line. The Chaikin Oscillator's value is then derived by subtracting the longer term EMA of the ADL from the shorter term EMA of the ADL. Ultimately this serves as a way to measure the momentum of the ADL by plotting a line which fluctuates between positive and negative values. Being aware of changes in momentum can help a trader or technical analyst to anticipate trend changes since changes in momentum often precede changes in trend.

Choppiness Index (CHOP)

The Choppiness Index (CHOP) is an indicator designed to determine if the market is choppy (trading sideways) or not choppy (trading within a trend in either direction). The Choppiness Index is an example of an indicator that is not directional at all. CHOP is not meant to predict future market direction, it is a metric to be used for defining the market's trendiness only. A basic understanding of the indicator would be; higher values equal more choppiness, while lower values indicate directional trending.

Commodity Channel Index (CCI)

The Commodity Channel Index (CCI) is a momentum oscillator used in technical analysis primarily to identify overbought and oversold levels by measuring an instrument's variations away from its statistical mean. CCI is a very well-known and widely-used indicator that has gained level of popularity in no small part of its versatility. Besides overbought/oversold levels, CCI is often used to find reversals as well as divergences. Originally, the indicator was designed to be used for identifying trends in commodities, however it is now used in a wide range of financial instruments.

Connors RSI (CRSI)

Connors RSI (CRSI) is a technical analysis indicator created by Larry Connors that is actually a composite of three separate components. The Relative Strength Index (RSI), developed by J. Welles Wilder, plays an integral role in Connors RSI. In fact, Wilder's RSI is used in two of the indicator's three components. The three components; The RSI, UpDown Length, and Rate-of-Change, combine to form a
momentum oscillator. Connors RSI outputs a value between 0 and 100, which is then used to identify short-term overbought and oversold conditions.

**Correlation Coefficient (CC)**

Correlation Coefficient (CC) is used in statistics to measure the correlation between two sets of data. In the trading world, the data sets would be stocks, ETF's or any other financial instrument. The correlation between two financial instruments, simply put, is the degree in which they are related. Correlation is based on a scale of 1 to -1. The closer the Correlation Coefficient is to 1, the higher their positive correlation. The instruments will move up and down together. The higher the Correlation efficient is to -1, the more they move in opposite directions. A value at 0 indicates that there is no correlation.

**Detrended Price Oscillator (DPO)**

The Detrended Price Oscillator indicator (DPO) is used to remove trend from price. This is done in order to identify and isolate short-term cycles. DPO is not typically aligned with the most current prices. It is offset to the left (the past) which helps to remove current trend. Because it is offset to the past, the DPO is not considered a momentum oscillator. It only measures past prices against a Simple Moving Average as a way to gauge a cycle's high/low range as well as typical duration.

**Directional Movement (DMI)**

Directional Movement (DMI) is actually a collection of three separate indicators combined into one. Directional Movement consists of the Average Directional Index (ADX), Plus Directional Indicator (+DI) and Minus Directional Indicator (-DI). DMI's purposes is to define whether or not there is a trend present. It does not take direction into account at all. The other two indicators (+DI and -DI) are used to compliment the ADX. They serve the purpose of determining trend direction. By combining all three, a technical analyst has a way of determining and measuring a trend's strength as well as its direction.

**Donchian Channels (DC)**

Donchian Channels (DC) are used in technical analysis to measure a market's volatility. It is a banded indicator, similar to Bollinger Bands. Besides measuring a market's volatility, Donchian Channels are primarily used to identify potential breakouts or overbought/oversold conditions when price reaches either the Upper or Lower Band. These instances would indicate possible trading signals.

**Ease of Movement (EOM)**

The Ease of Movement indicator (EOM) is a volume based oscillator. It is designed to measure the relationship between price and volume and display that relationship as an oscillator that fluctuates between positive and negative values. The EOM fluctuates above and below a Zero Line. This is done in order to quantify the "ease" of price movements. A basic understanding is that when the EOM is in positive territory, prices are advancing with relative ease. When the EOM is negative, prices are declining with relative ease.

**Elder's Force Index (EFI)**

Elder's Force Index (EFI) measures the power behind a price movement using price and volume. The indicator can also be used to identify potential reversals and price corrections. The EFI is an oscillator that fluctuates between positive and negative values, above and below a Zero Line. Alexander Elder, the indicator's creator, believed that there are three components to a security's price movement. Those three
components are: direction, extent and volume. All three of these components are combined by the EFI to generate the oscillator.

**Envelope (ENV)**

Moving Average Envelopes (ENV) are a banded indicator. ENV displays an upper envelope above a basis line and a lower envelope below the basis line. The basis line is a moving average, either a simple moving average or an exponential moving average. The envelopes are set a (user defined) percentage away from the basis line. Envelopes are a good indicator for trend identification as well as identifying overbought and oversold conditions.

**Keltner Channels (KC)**

The Keltner Channels (KC) indicator is a banded indicator similar to Bollinger Bands and Moving Average Envelopes. They consist of an Upper Envelope above a Middle Line as well as a Lower Envelope below the Middle Line. The Middle Line is a moving average of price over a user-defined time period. Either a simple moving average or an exponential moving average are typically used. The Upper and Lower Envelopes are set a (user-defined multiple) of a range away from the Middle Line. This can be a multiple of the daily high/low range, or more commonly a multiple of the Average True Range.

**Know Sure Thing (KST)**

The Know Sure Thing indicator (KST) is a momentum based oscillator. KST is based on Rate of Change (ROC). Know Sure Thing takes four different timeframes of ROC and smooth's them out using Simple Moving Averages. KST then calculates a final value that fluctuates between positive and negative values above and below a Zero Line. There is also a signal line which is an SMA of the KST line itself. Essentially, the Know Sure Thing Indicator measures the momentum of four separate price cycles. Technical Analysts use this information to spot divergences, overbought and oversold conditions and crossovers.

**MACD (Moving Average Convergence/Divergence)**

MACD is an extremely popular indicator used in technical analysis. MACD can be used to identify aspects of a security's overall trend. Most notably these aspects are momentum, as well as trend direction and duration. What makes MACD so informative is that it is actually the combination of two different types of indicators. First, MACD employs two Moving Averages of varying lengths (which are lagging indicators) to identify trend direction and duration. Then, MACD takes the difference in values between those two Moving Averages (MACD Line) and an EMA of those Moving Averages (Signal Line) and plots that difference between the two lines as a histogram which oscillates above and below a center Zero Line. The histogram is used as a good indication of a security's momentum.

**Money Flow (MFI)**

The Money Flow Index indicator (MFI) is a tool used in technical analysis for measuring buying and selling pressure. This is done through analyzing both price and volume. The MFI's calculation generates a value that is then plotted as a line that moves within a range of 0-100, making it an oscillator. When the MFI rises, this indicates an increase in buying pressure. When it falls, this indicates an increase in selling pressure. The Money Flow Index can generate several signals, most notably; overbought and oversold conditions, divergences, and failure swings.

**Moving Average**
Moving Average (MA) is a price based, lagging (or reactive) indicator that displays the average price of a security over a set period of time. A Moving Average is a good way to gauge momentum as well as to confirm trends, and define areas of support and resistance. Essentially, Moving Averages smooth out the “noise” when trying to interpret charts. Noise is made up of fluctuations of both price and volume. Because a Moving Average is a lagging indicator and reacts to events that have already happened, it is not used as a predictive indicator but rather an interpretive one, used for confirmations and analysis. In fact, Moving Averages form the basis of several other well-known technical analysis tools such as Bollinger Bands and the MACD. There are a few different types of Moving Averages which all take the same basic premise and add a variation. Most notable are the Simple Moving Average (SMA), the Exponential Moving Average (EMA) and the Weighted Moving Average (WMA).

**On Balance Volume (OBV)**

The On Balance Volume indicator (OBV) is used in technical analysis to measure buying and selling pressure. It is a cumulative indicator meaning that on days where price went up, that day's volume is added to the cumulative OBV total. If price went down, then that day's volume is subtracted from the OBV total. The OBV value is then plotted as a line for easy interpretation. On Balance volume is primarily used to confirm or identify overall price trends or to anticipate price movements after divergences.

**Parabolic SAR (SAR)**

Parabolic SAR (SAR) is a time and price technical analysis tool primarily used to identify points of potential stops and reverses. In fact, the SAR in Parabolic SAR stands for "Stop and Reverse". The indicator's calculations create a parabola which is located below price during a Bullish Trend and above Price during a Bearish Trend.

**Price Oscillator (PPO)**

The Price Oscillator indicator (PPO) is a technical analysis tool, used for measuring momentum that is very similar to the MACD. The MACD employs two Moving Averages of varying lengths (which are lagging indicators) to identify trend direction and duration. Then, MACD takes the difference in values between those two Moving Averages (MACD Line) and an EMA of those Moving Averages (Signal Line) and plots that difference between the two lines as a histogram which oscillates above and below a center Zero Line.

PPO is exactly the same, however it then takes the same values at the MACD and calculates them as a percentage. The purpose of this, is that it makes value comparisons much more simple and straightforward over longer durations of time.

**Price Volume Trend (PVT)**

The Price Volume Trend indicator (PVT) is a momentum based indicator used to measure money flow. PVT is similar to another technical analysis tool; On Balance Volume (OBV) in that it is an accumulation of volume. While the OBV adds or subtracts total daily volume depending on if it was an up day or a down day, PVT only adds or subtracts a portion of the daily volume. The amount of volume added or subtracted to/from the PVT total is dependent on the amount of the current day's price rising or falling compared to the previous day's close. Price Volume Trend (PVT) can primarily be used to confirm trends, as well as spot possible trading signals due to divergences.

**Rate of Change (ROC)**
The Rate of Change indicator (ROC) is a momentum oscillator. It calculates the percent change in price between periods. ROC takes the current price and compares it to a price "n" periods (user defined) ago. The calculated value is then plotted and fluctuates above and below a Zero Line. A technical analyst may use Rate of Change (ROC) for; trend identification, and identifying overbought and oversold conditions.

Relative Strength Index (RSI)

The Relative Strength Index (RSI) is a well versed momentum based oscillator which is used to measure the speed (velocity) as well as the change (magnitude) of directional price movements. Essentially RSI, when graphed, provides a visual mean to monitor both the current, as well as historical, strength and weakness of a particular market. The strength or weakness is based on closing prices over the duration of a specified trading period creating a reliable metric of price and momentum changes. Given the popularity of cash settled instruments (stock indexes) and leveraged financial products (the entire field of derivatives); RSI has proven to be a viable indicator of price movements.

Stochastic (STOCH)

The Stochastic Oscillator (STOCH) is a range bound momentum oscillator. The Stochastic indicator is designed to display the location of the close compared to the high/low range over a user defined number of periods. Typically, the Stochastic Oscillator is used for three things; Identifying overbought and oversold levels, spotting divergences and also identifying bull and bear set ups or signals.

Stochastic RSI (STOCH RSI)

The Stochastic RSI indicator (Stoch RSI) is essentially an indicator of an indicator. It is used in technical analysis to provide a stochastic calculation to the RSI indicator. This means that it is a measure of RSI relative to its RSI's own high/low range over a user defined period of time. The Stochastic RSI is an oscillator that calculates a value between 0 and 1 which is then plotted as a line. This indicator is primarily used for identifying overbought and oversold conditions.

TRIX

The TRIX indicator is used in technical analysis as a momentum oscillator. It is comprised of the rate of change of a triple exponentially smoothed moving average. The key signals generated by TRIX are divergences and signal line crossovers.

Ultimate Oscillator (UO)

The Ultimate Oscillator indicator (UO) indicator is a technical analysis tool used to measure momentum across three varying timeframes. The problem with many momentum oscillators is that after a rapid advance or decline in price, they can form false divergence trading signals. For example, after a rapid rise in price, a bearish divergence signal may present itself, however price continues to rise. The ultimate Oscillator attempts to correct this by using multiple timeframes in its calculation as opposed to just one timeframe which is what is used in most other momentum oscillators.

Volume Profile

Volume Profile is an advanced charting study that displays trading activity over a specified time period at specified price levels. The study (accounting for user defined parameters such as number of rows and time period) plots a histogram on the chart meant to reveal dominant and/or significant price levels based on volume. Essentially, Volume Profile takes the total volume traded at a specific price level during the
specified time period and divides the total volume into either buy volume or sell volume and then makes that information easily visible to the trader.

**Volume Weighted Average Price (VWAP)**

Volume Weighted Average Price (VWAP) is a technical analysis tool used to measure the average price weighted by volume. VWAP is typically used with intraday charts as a way to determine the general direction of intraday prices. VWAP is similar to a moving average in that when price is above VWAP, prices are rising and when price is below VWAP, prices are falling. VWAP is primarily used by technical analysts to identify market trend.

**Williams %R (%R)**

Williams %R (%R) is a momentum based oscillator used in technical analysis, primarily to identify overbought and oversold conditions. The %R is based on a comparison between the current close and the highest high for a user defined look back period. %R Oscillates between 0 and -100 (note the negative values) with readings closer to zero indicating more overbought conditions and readings closer to -100 indicating oversold. Typically %R can generate set ups based on overbought and oversold conditions as well overall changes in momentum.